EFFECT OF VASCULAR ENDOTHELIAL GROWTH FACTOR (VEGF) 121 RECOMBINANT TO EXPRESSION VEGFR-1 IN PLACENTA OF MICE (Mus musculus) MODEL *PREECLAMPSIA*

PENGARUH PEMBERIAN VASCULAR ENDOTHELIAL GROWTH FACTOR (VEGF) 121 REKOMBINAN TERHADAP EKSPRESI VEGFR-1 PLASENTA PADA MENCIT (Mus Musculus) MODEL PREEKLAMPSIA

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Abstract

Background: Preeclampsia is one of the major contributors to morbidity and mortality in the mother and fetus. Imbalance of pro-angiogenic factors and anti-angiogenic factor has important role in pathogenesis of preeclampsia,include PIGF and VEGF. Provision VEGF Recombinant is suspected decreased Sflt 1. This study aims to prove the effect of VEGF Recombinant 121 in expression VEGFR 1 in placenta of preeclampsia-model mice (*mus musculus*).

Methods: This analytic experimental study perform in 30 health mice (mus musculus) that pregnant for 16 days, with 20-25 gram bodyweight, to analyze in 3 groups, that are 10 normal pregnant mice (k(-)), 10 preeclampsia mice (K(+)), 10 preeclampsia that treat by VEGF Recombinant 121 (P). Sampling have done in all mice serum disentrigfugated at room temperature with a force of 3000 grams per 10 minutes and then stored at 80 ° C prior to measurement,except 1 sample had unable to analiyzed. Results from each sample assessed semiquantitatively according *Remmele-modified* methods, where the Remmele index scale (immuno reactive score / IRS) is the result of multiplying the percentage of immunoreactive cells score to the color intensity immunoreactive cells score. Data analysis was done using *Kruskal Wallis* and *Mann Whitney* performed by SPSS Software Package for Social Science) 21.

Results: Expression VEGFR 1 mean of group K(-) is 0.80+1.13/µm2, K(+) groups is 3.50+1.43 /µm2, and (P) groups is 1.30+ 0.70 /µm2. We found significant differences in normal groups compare to preeclampsia groups (p=0.001*), and also in preeclampsia group compare to treatment groups (p=0.000*). But in preeclampsia groups compare to normal groups there is no significant differences (p=1.000). So we can see that VEGF Recombinant 121 is effective to reduce expression VEGFR 1 in placenta of preeclampsia mice models (mus musculus).

Conclusion: There are proven significant effectiveness of treatment VEGF Recombinant 121 in expression VEGFR 1 in placenta of preeclampsia mice models (mus musculus).